



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,069	09/24/2003	Raymond Elijah Barnett	TI-35901	5105
7590	12/23/2004		EXAMINER	
Dan Swayze Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265			NGUYEN, KHANH V	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/670,069

Applicant(s)

BARNETT, RAYMOND ELIJAH

Examiner

Khanh V. Nguyen

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2817

## DETAILED ACTION

### *Claim Objections*

Claim 1 is objected to because of the following informalities: line 5, 4<sup>th</sup> limitation appears to be incomplete. Should "coupled" correctly be --interconnected--?

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7, 8, 10-16, 21, 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung et al. (6,822,817).

Regarding claims 1, 10, Chung et al. (Fig. 5) disclose an amplifier circuit comprising: a serially coupled first resistor (520) and a first transistor (Q1); a serially coupled second resistor (522) and a second transistor (Q3); a resistive sensor (502) coupled to the first and second transistor; wherein the first and second resistor are coupled via Vcc; and a transconductance feedback block (542) coupled to the resistive sensor (506) and serially coupled to the resistors (520, 522) and transistors (Q1, Q3).

Regarding claims 2, 11, wherein voltage (Vin) can be read as a first voltage supply having the connection thereof.

Art Unit: 2817

Regarding claims 3, 12, wherein voltage (Vcc) can be read as a second voltage supply having the connection thereof.

Regarding claims 4, 13, wherein the resistive sensor (502) is used for reading data from a disk.

Regarding claim 5, wherein transistors (520, 522) can be a low noise transistors.

Regarding claim 7, wherein transistors (520, 522) are bipolar transistors.

Regarding claims 8, 22, wherein transistors (520, 522) perform as a common-base amplifier.

Regarding claim 14, wherein the voltage across the resistive sensor (502) appears at the input (base) of the transistors (520, 522).

Regarding claim 15, wherein the transistors (520, 522) for amplifying the voltage from resistive sensor (502).

Regarding claim 16, wherein the change in the output voltage correspond to the change in the input.

Regarding claim 21, wherein the input is independently controlled via the base of the transistor.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2817

Claims 6, 9, 17-20, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al.

Regarding claim 6, Chung et al. disclose the claimed invention except the MOS transistor claimed. It would have been obvious to one of ordinary skill in the art to replace bipolar transistors of Chung et al. with field effect transistors (MOS) since it is known in the art that bipolar transistor and MOS transistor can be used interchangeably.

Regarding claims 9, 23, note claim 6, wherein transistors perform as a common-gate amplifier.

Regarding claims 17-20, the method recited in these claims can be obtained by changing the component(s) value(s)/size(s) of the reference circuit. A change in size is generally recognized as being within the level of ordinary skill in the art.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references (Nagahori et al. (5,798,664); Bhandari et al. (6,473,253)) show further analogous prior art circuitry.

These arts are deemed relevant and should be carefully reviews before any amendment is filed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers

Art Unit: 2817

for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Khanh V. Nguyen', with a long horizontal flourish extending to the right.

**KHANH V. NGUYEN**  
**PRIMARY EXAMINER**